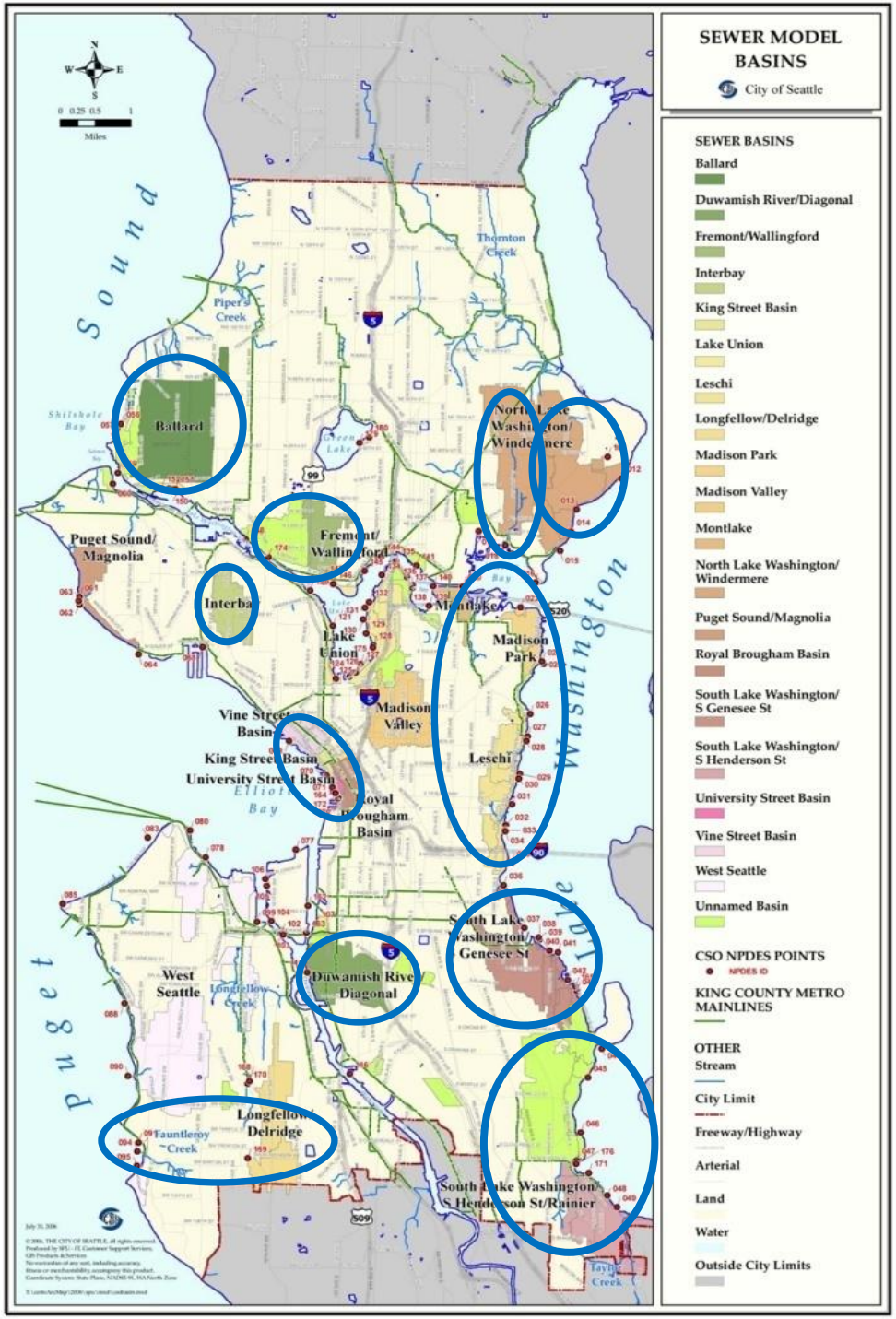
Combined Sewer Overflow Reduction Program Briefing

RESTORE OUR WATERS
SEATTLE PUBLIC UTILITIES
COMBINED SEWER OVERFLOW REDUCTION

Seattle City Council
Seattle Public Utilities & Neighborhoods Committee

February 8, 2011

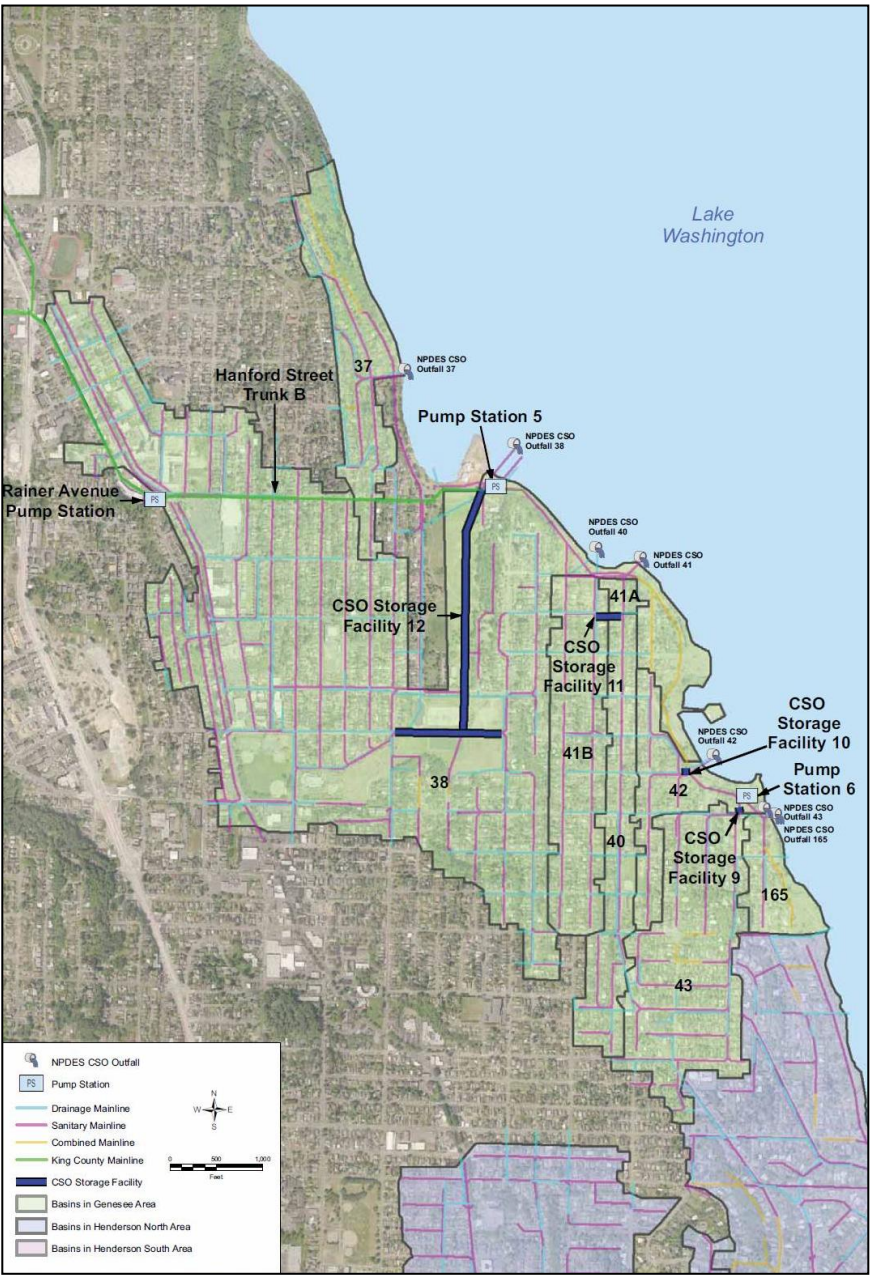


Commitments for Next 5 Years

Comply with current NPDES Permit, Administrative order and Consent Decree negotiations:

- Improving existing system through retrofits
- Constructing CSO projects
  - Windermere, Genesee, and Henderson basins
- Implementing green infrastructure projects in Ballard
- Completing Long-term Control Plan

Genesee CSO Reduction Project



- Top Priority Basin
- 700 Acres
- Construction 2013-2015
- Reduces CSOs from 10 times to 1 time per year
- Storage Volumes:
  - Basins 40/41: 430,000 gal
  - Basin 43: ~250,000 gal

Basin 40/41: Storage Sites Considered

- A: Pipeline storage along Lake Washington Blvd and new pump station at Genesee Park
- **B: Triangle Parking Lot *(recommended)***
- C: Private Property Acquisition *(would require acquisition of 3-5 properties around Lake Washington Blvd and 49th Ave S.)*

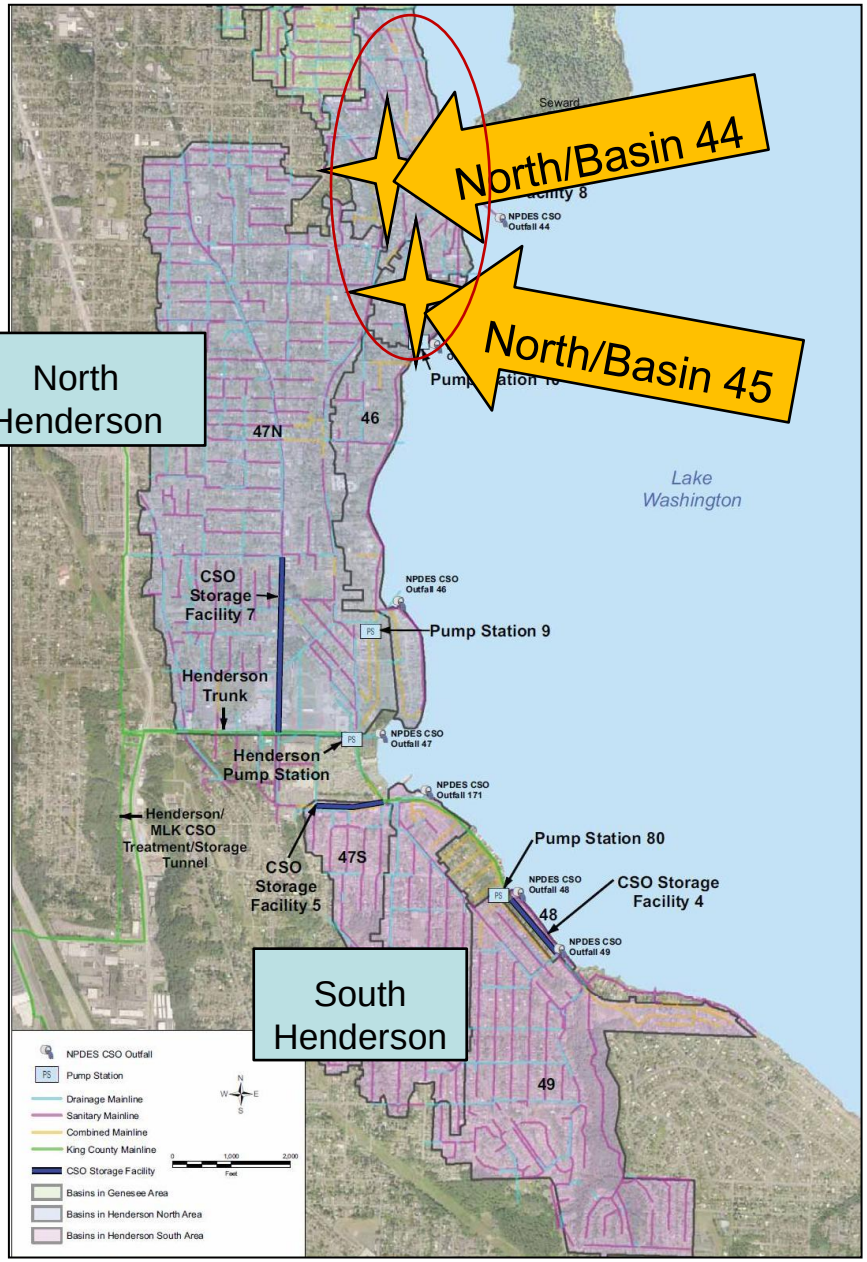
Basin 43: Storage Sites Considered

- A: 54th Ave S.
- B: Open Space at 54th Ave S and S. Alaska St.
- C: Private property acquisition *(would require acquisition of up to 5 properties around S. Alaska St & 54th Ave S.)*
- **D: 53rd Ave S. & Lake Washington Blvd Parking Lot *(recommended)***

Genesee Project: Community Feedback & Report Out

- Pipeline storage on 54th Ave S has significant construction impacts on private property owners.
- Underground storage in open space at S. Alaska St and 54th Ave S is less impacting, but green space and trees should be protected as much as possible.
- Consider parking lot at 53rd Ave S and Lake Washington Blvd as alternate site.
- Consider private property along S. Alaska Street.
- Consider constructing along S. Alaska Street instead of 54th Ave S.
- If a Parks site is selected, constructing the tank underneath an existing impervious surface (e.g., parking lot) is least impacting.

Henderson CSO Basins



- Top-Priority for CSO reduction
- 1,800 Acres
- Seven basins
- CSOs discharge approximately 17 times per year
- Storage Volumes:
  - Basins 44: 2,000,000 gal
  - Basin 45: 200,000 gal
- Construction must begin in 2015

North Henderson Workshops

November 18, 2010

- Presented CSO reduction options (storage, transfer, separation, treatment)
- Obtained feedback to consider separation, inflow/infiltration reduction, and more innovative technologies to reduce CSOs.
- Obtained input on community values and concerns

December 14, 2010

- Present site-specific CSO reduction alternatives
- Obtain feedback on alternatives
- Confirm evaluation criteria (i.e., community values and concerns)
- Weight relative importance of evaluation criteria

January 19, 2011

- Present results of alternatives evaluation
- Obtain feedback on results
- Narrow down site-specific alternatives

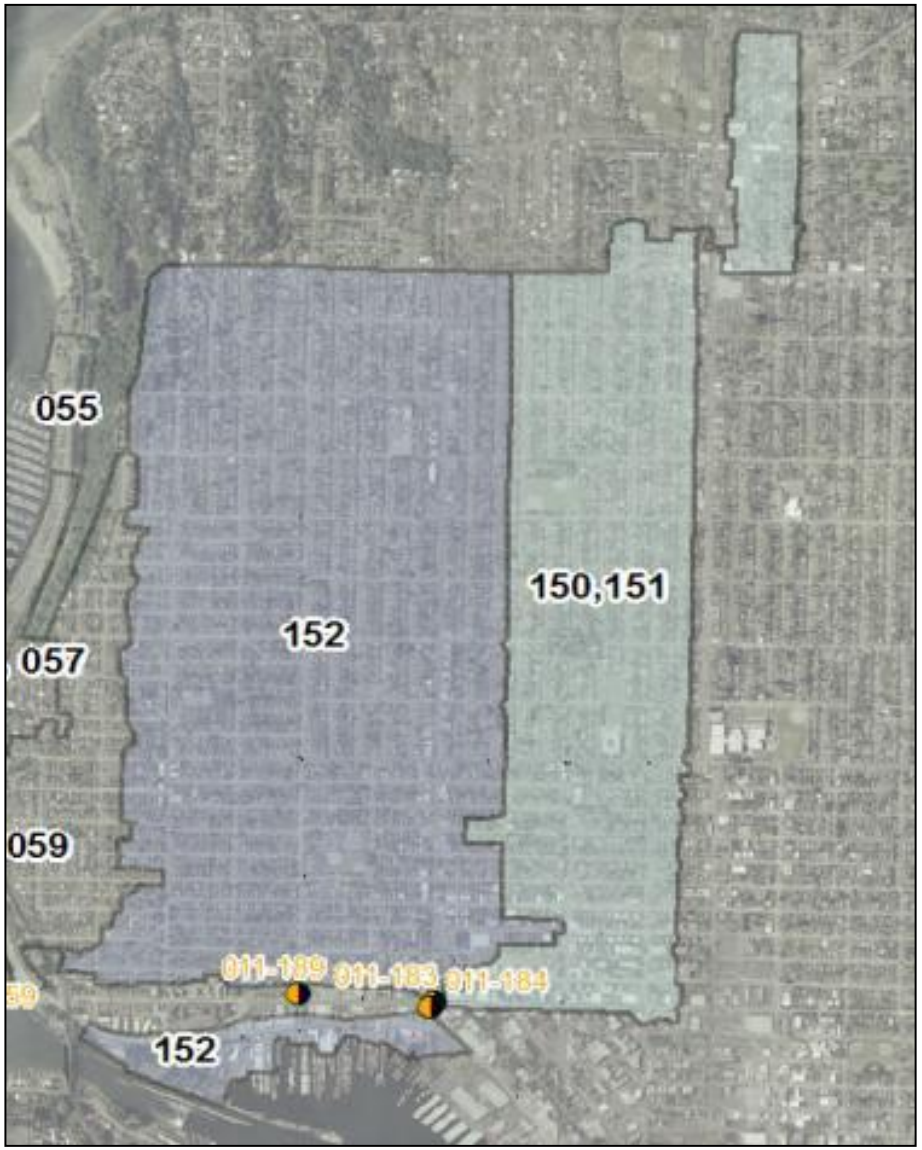
Summary of Alternatives

- Distributed Storage
  - **Basin 44** (Storage under private property, Seward Park parking lot, or Lake Washington Blvd)
  - **Basin 45** (Storage under private property, Martha Wahsington Park open space, or 57th Ave S.)
- Tunnel Storage
- Conveyance and Storage
- Complete Sewer Separation *(includes Inflow & Infiltration Reduction)*

North Henderson Project: Community Feedback & Report Out

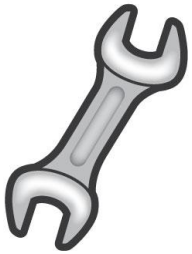
- Private property acquisition is significantly opposed.
- General public support for the “Distributed Storage” alternative.
- Strong interest in preserving the character and use of Seward Park and Martha Washington Park.
- General opposition to the “Tunnel” alternative.
- Some public support for the “Complete Sewer Separation” alternative.

Ballard Area Combined Sewer Overflows (CSOs)



- Two overflow points (NPDES 150/151, 152)
- Approximately 40-50 overflows per year
- Approximately 20-30 million gallons of overflow per year
- In December 2010:
  - 23 million gals CSO
  - 10 CSO events

Ballard Area
CSO Reduction Solutions



Retrofits

Make small modifications to existing infrastructure to maximize existing system capacity.

Green

Allows stormwater to slowly filter into ground, keeping it out of sewer system; applicable to public and private property

Storage

Increase capacity of underground pipes and tanks.

Ballard offers a unique opportunity for green solutions

Ballard Roadside Raingardens Pilot Project

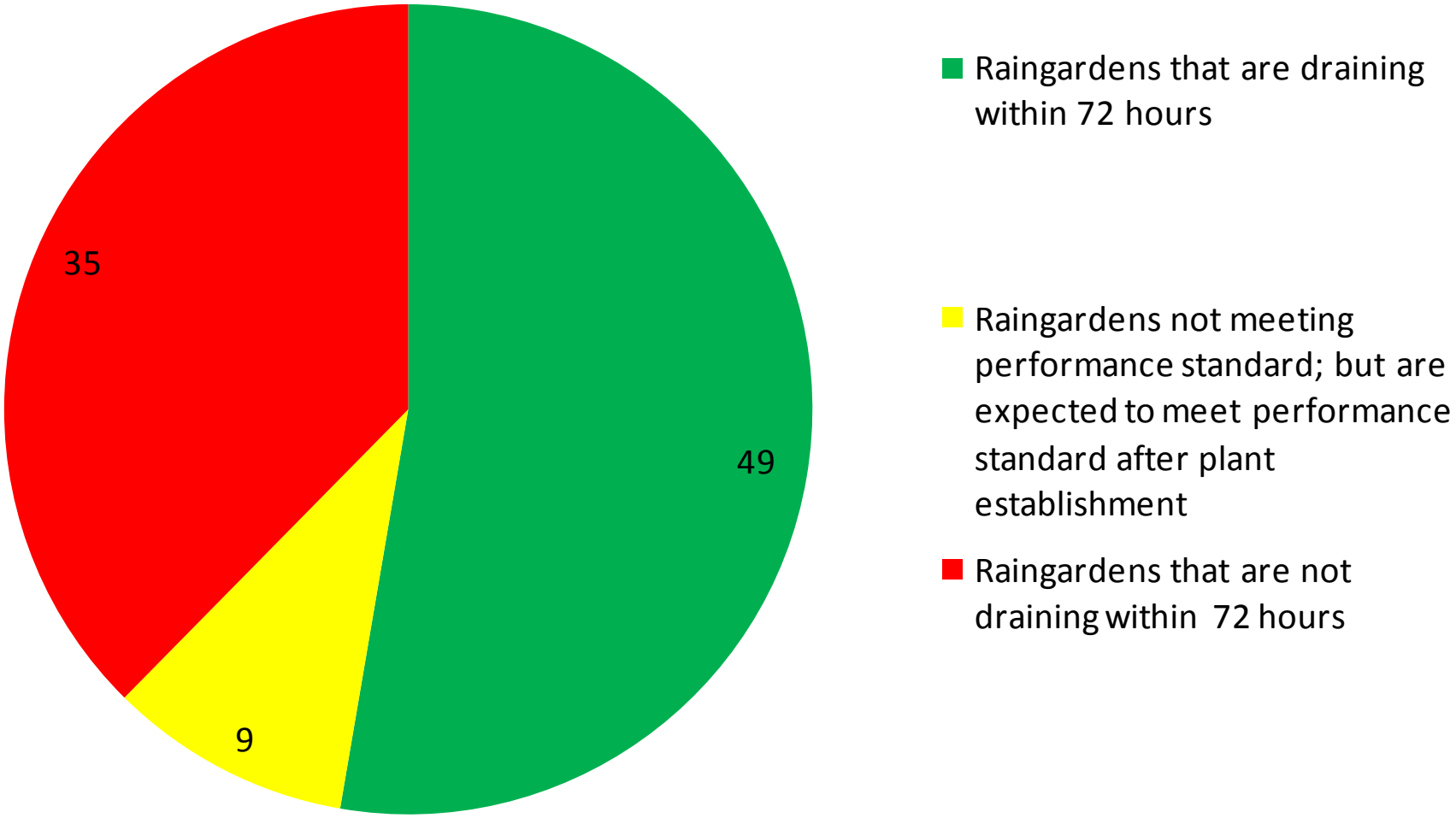
- Pilot project was designed and constructed in 2010
- Installed 10 blocks of roadside raingardens; total of 93 raingarden cells
- Additional plants will be planted in the Spring 2011.

Performance Monitoring

- Performing at design standards
- Not performing at design standards but expected to meet them by fall 2011
- Not performing at design standards

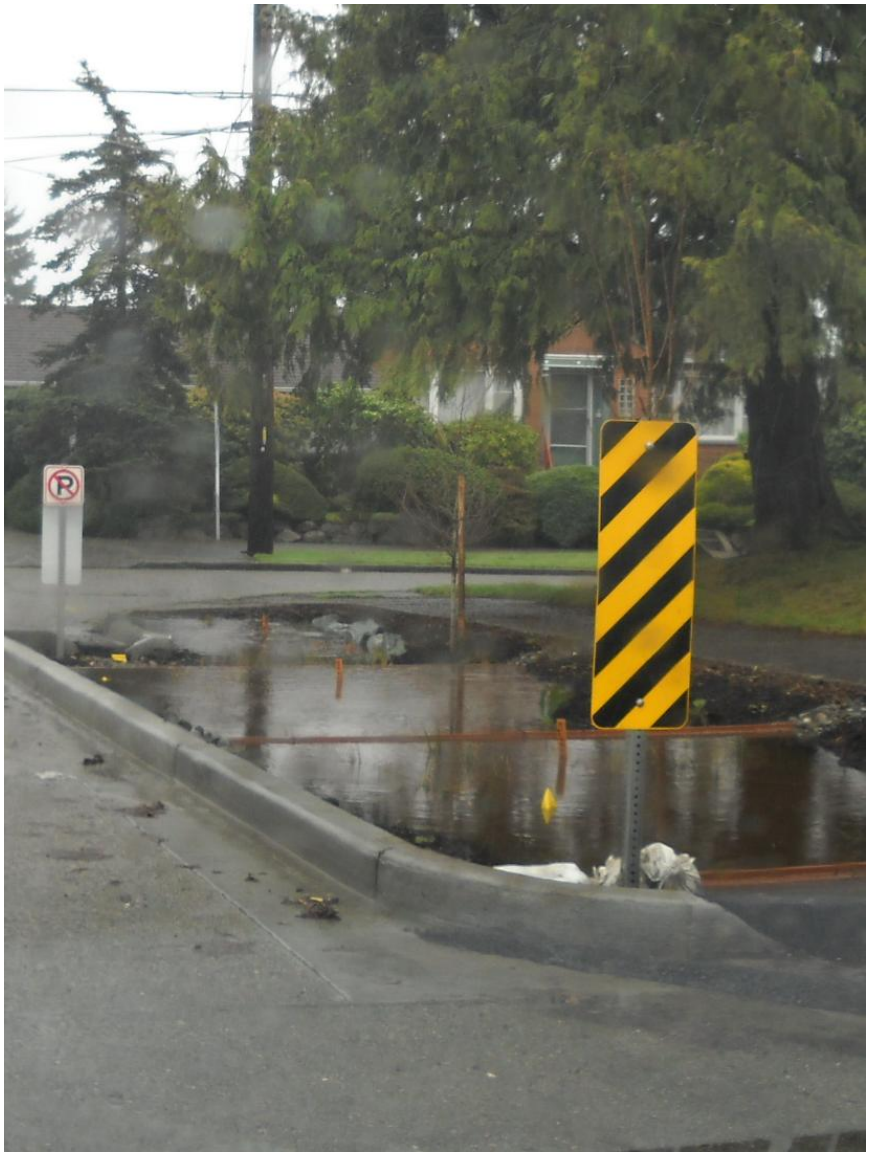
Some of the raingardens have not performed according to the design criteria.

Performance Monitoring Summary



Ballard Roadside Raingardens Pilot Project: Community Feedback & Report Out

- Raingardens are not draining within 72 hours; standing water is unacceptable because of health and safety.
- There are too many signs, they are unnecessary, and they do not fit in this residential neighborhood.
- The raingardens are ugly, and my property value has gone down.
- The raingardens are too deep and the slopes are not safe.



What has SPU learned from this pilot project so far, and what are we doing about it?

- We need to slow down and take more time as we roll these out to other neighborhoods.
- We need to improve our neighborhood communications throughout the development and construction process.
- We need to review our performance standards for these facilities to better address citizen concerns.
- We need to institute a modification process during construction to accommodate changing site conditions.

Past Project Example: Broadview Greengrid

Just planted

+4 years - winter

Contact Information

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